CLAIMS – CLEAN COPY AS AMENDED

16. A method of obtaining a solution of calcium ions from lime, comprising

(i) treating the lime with an aqueous solution of a polyhydroxy compound of the formula $HOCH_2(CHOH)_nCH_2OH$ in which n is 1 to 6; and

(ii) optionally separating insoluble impurities from the solution resulting from (i).

17. A method according to claim 16, wherein the lime is carbide lime.

18. A method according to claim 17 wherein insoluble impurities are separated from the solution resulting from (i).

19. A method according to claim 16, wherein the lime is a product of the calcining of limestone or dolomite.

20. A method as claimed in claim 16, wherein the polyhydroxy compound is glycerol.

21. A method according to claim 16, wherein the sugar alcohol is sorbitol, mannitol, xylitol, threitol or erythritol.

22. A method according to claim 21 wherein the polyhydroxy compound is sorbitol.

23. A method as claimed in claim 16, wherein the polyhydroxy compound is employed as 10%-80% by weight solution in water.

24. A method as claimed in claim 21, wherein the polyhydroxy compound is employed as a 10% to 60% by weight solution.

25. A method as claimed in claim 20, wherein the glycerol is employed as a 60% to 80% by weight solution in water.

26. A method as claimed in claim 16, wherein the amount of lime is such as to provide 3-12 parts by weight per 10 to 80% by weight of the polyhydroxy compound.

27. A method as claimed in claim 16 effected at a temperature of 5°C-60°C.

A1

28. A method of producing a calcium containing product comprising the steps of:

(i) preparing a solution of calcium ions according to the procedure of any one of claims 1 to 12; and

(ii) adding to the solution from (i) a precipitating agent which causes precipitation of the desired calcium containing product.

29. A method as claimed in claim 28, wherein the precipitating agent is carbon dioxide and the product obtained is precipitated calcium carbonate.

30. A method of producing precipitated calcium carbonate from carbide lime comprising:

(i) treating the carbide lime with an aqueous solution of sorbitol to extract calcium from the carbide lime;

(ii) separating the insoluble impurities from the solution resulting from (i); and

SUBC1

(iii) treating the solution with carbon dioxide.